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August 4, 2000

Mr. Norm Linton
Potlatch Corporation
1100 Railroad Avenue
P.O. Box 386
St. Maries, Idaho 83861

Re: Site Characterization and Second Quarter 2000 Performance Report
Avery Landing Recovery System
J-2296-07

Dear Mr. Linton:

Hart Crowser is pleased to present the Site Characterization and Second Quarter 2000 Performance Report for the Avery Landing free product recovery system. This letter report presents the results of our site characterization work completed in June 2000 and the second quarter groundwater elevations and product thickness measurements.

SITE CHARACTERIZATION

The purpose of the site characterization was to better define the areal extent of petroleum impacted soil at the Avery Landing site and to determine the depth of free product. To accomplish this, twelve test pits were completed during the site characterization work. Slotted monitoring well casings were installed in eleven of the test pits. Test pit TP-1 had two slotted well casings installed. One casing was 2 inches in depth and the second was 4 inches. No casing was installed in TP-4 because free product was not encountered. This allowed us to install an extra monitoring well, TP-11, in a separate area needing better product delineation. The remaining ten test pit locations had 4-inch casings installed. Figure 1 depicts the location of the test pits and the estimated areal extent of free product based on field observations.

Test pits TP-2, TP-3, TP-5, TP-7, TP-10, and TP-12 contained a visible sheen of product during installation. Upgradient wells were installed within the free product zone, while the downgradient wells were moved slightly outside the plume when possible. This will allow better plume delineation over the course of the remediation. As product is removed from the subsurface, the product thickness in the upgradient wells should decrease. Product

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occurring in downgradient wells will indicate migration of the plume. The newly installed wells will be monitored on the same schedule as existing wells.

GROUNDWATER AND PRODUCT QUARTERLY MONITORING

Four extraction wells (EW-1 through EW-4), two piezometers (P1 and P2), four monitoring wells (MW-5, MW-11, HC-1, and HC-4), and twelve test pits (TP-1 (2"), TP-1 (4"), TP-2, TP-3, TP-5, TP-6, TP-7, TP-8, TP-9, TP-10, TP-11, and TP-12) were monitored on June 14, 2000. Well, piezometer, and test pit locations are shown on Figure 1. At each monitoring location, depth to product and depth to groundwater measurements were performed using a Solinist, a free product measuring device.

The extraction well operation was observed as follows:

- EW-1 is no longer in use, as described in the 1998 Annual Report;
- EW-2 was operating and maintaining groundwater depression; and
- EW-3 and EW-4 were operating but not maintaining groundwater capture. Free product was not detected in either EW-3 or EW-4.

Based on both past and present data, the plume area is defined as shown on Figure 1. The free product area did not differ dramatically from what was originally estimated, but the estimated depth of product over that area has decreased significantly. Based on the monitoring points in TP-1, it appears the product depth in the 2-inch monitoring wells may be exaggerating the depth of product by an order of magnitude. The 4-inch casings installed seem to be much more representative of the actual product depth in the soils. TP-1 was left open for two days to best show the actual *in situ* depth of product. The measured depth of product in TP-1 after two days was 0.04 foot. This was the same as the depth measured in the 4-inch casing, and 10 times less than that measured in the 2-inch casing. Future monitoring events should continue to show a smaller overall depth of product for the site than was originally estimated. Using a conservative estimate of 0.03 foot of product over the entire plume area of 92,000 square feet, approximately 21,000 gallons of oil may exist on site.

FREE PRODUCT RECOVERY

The current approximate total product removed is 775 gallons. About 25 gallons of product have been extracted in the last two quarters of system operation. Product recovery rates usually increase during the low water summer months.

PROJECT SCHEDULE

Table 2 presents the project schedule for the remainder of 2000. We plan to perform the next monitoring event on September 20, 2000, and will submit the third quarter monitoring report by October 13, 2000. Construction of the containment wall is scheduled for the second and third weeks of September. The construction schedule depends on Potlatch receiving the required permits.

Table 2- Avery Landing Recovery System
2000 Project Schedule

Activity	Schedule
Containment Wall Construction	September 11-20, 2000
Perform 3rd Quarter Site Visit	September 20, 2000
Submit 3rd Quarter Monitoring Report	October 13, 2000
Perform 4th Quarter Site Visit	December 7, 2000
Submit 4th Quarter Monitoring Report	December 29, 2000
Submit Annual Summary Report	February 9, 2001

LIMITATIONS

Work for this project was performed, and this letter report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed, in the same or similar location, at the time the work was performed. It is intended for the exclusive use of the Potlatch Corporation for specific application to the referenced property.

If additional information or clarification is required, please call Terry Montoya at (206) 324-9530.

Sincerely,

HART CROWSER, INC.

Terry Montoya by SZS

TERRY MONTOYA
Project Engineer

Matt Schultz, by GBeck

MATT SCHULTZ, P.E.
Senior Associate Engineer

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Attachments:
Table 1 - Avery Landing Groundwater and River Monitoring Data
Figure 1 - Avery Landing First Quarter 2000 Groundwater Flow Direction Map

cc: Kreg Beck, Idaho Department of Environmental Quality

Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
EW-1	10/27/1994	ND	11	0	95.34	84.34
	6/30/1995	ND	10.9	0	95.34	84.44
	9/21/95	11.25	11.27	0.02	95.34	84.07
	7/11/1996	ND	9.74	0	95.34	85.60
	9/11/1996	ND	10.88	0	95.34	84.46
	11/5/1996	ND	11.94	0	95.34	83.40
	7/17/1997	ND	10.38	0	95.34	84.96
	10/9/1997	ND	13.17	0	95.34	82.17
	6/25/1998	ND	10.01	0	95.34	85.33
	8/12/1998	NM	10.52	0	95.34	84.82
	10/22/1998	Sheen	10.86	0	95.34	84.48
	3/18/1999			0	95.34	85.57
	6/22/1999	ND	11.68	0	95.34	83.66
	9/16/1999	ND	10.72	0	95.34	84.62
	12/2/1999	ND	9.78	0	95.34	85.56
	3/30/2000	ND	9.03	0	95.34	86.31
EW-2	10/27/1994	ND	10.37	0	95.24	84.87
	6/30/1995	10.57	10.89	0.32	95.24	84.35
	9/21/95	13.9	13.92	0.02	95.24	81.32
	7/11/1996	11.03	11.66	0.63	95.24	83.58
	9/11/1996	Sheen	14.00	0	95.24	81.24
	11/5/1996	Sheen	12.27	0	95.24	82.97
	7/17/1997	8.99	9.09	0.1	95.24	86.15
	10/9/1997	Sheen	15.44	0	95.24	79.80
	6/25/1998	9.19	9.64	0.45	95.24	85.60
	8/12/1998	NM	9.99	0	95.24	85.25
	10/22/1998	Sheen	10.94	0	95.24	84.30
	3/18/1999	10.17	10.27	0.1	95.24	84.97
	6/22/1999	11.3	11.31	0.01	95.24	83.93
	9/16/1999	15.32	15.35	0.03	95.24	79.89
	12/2/1999	9.91	10.1	0.19	95.24	85.14
	3/30/2000	9.5	10.29	0.79	95.24	84.95
	6/14/2000	8.89	9.39	0.5	95.24	85.85
EW-3	10/27/1994	ND	10.05	0	95.78	85.73
	6/30/1995	9.35	9.8	0.45	95.78	85.98
	9/21/95	10.92	11.08+	0.16	95.78	84.70
	7/11/1996	8.53	8.64	0.11	95.78	87.14
	9/11/1996	10.75	11.70	0.95	95.78	84.08
	11/5/1996	Sheen	11.8	0	95.78	83.98
	7/17/1997	9.13	9.33	0.2	95.78	86.45
	10/9/1997	10.9	11.68	0.78	95.78	84.10
	6/25/1998	8.78	9.43	0.65	95.78	86.35
	8/12/1998	ND	11	0	95.78	84.78
	10/22/1998	12.58	13.38	0.8	95.78	82.40

Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
EW-3	3/18/1999	9.03	9.23	0.2	95.78	86.55
(Continued)	6/22/1999	11.1	11.25	0.15	95.78	84.53
	9/16/1999	10.76	11.06	0.3	95.78	84.72
	12/2/1999	9.04	9.1	0.06	95.78	86.68
	3/30/2000	ND	9.08	0	95.78	86.70
	6/14/2000	ND	7.68	0	95.78	88.10
EW-4	10/27/1994	ND	8.05	0	94.32	86.27
	6/30/1995	7.84	7.85	0.01	94.32	86.47
	9/21/95	8.22	8.24	0.02	94.32	86.08
	7/11/1996	Sheen	6.44	0	94.32	87.88
	11/5/1996	Sheen	8.08	0	94.32	86.24
	7/17/1997	Sheen	5.43	0	94.32	88.89
	10/9/1997	Sheen	7.11	0	94.32	87.21
	6/25/1998	5.28	5.3	0.02	94.32	89.02
	8/12/1998	NM	8.98	0	94.32	85.34
	10/22/1998	ND	8.98	0	94.32	85.34
	3/18/1999	5.18	5.26	0	94.32	89.06
	6/22/1999	Sheen	9	0	94.32	85.32
	9/16/1999	8.45	9.27	0.82	94.32	85.05
	12/2/1999	7.31	7.36	0.05	94.32	86.96
	3/30/2000	Sheen	6.5	0	94.32	87.82
	6/14/2000	ND	4.69	0	94.32	89.63
HC-1	10/27/1994	ND	13.25	0	97.50	84.25
	6/30/1995	ND	12.00	0	97.50	85.50
	9/21/95	NM	13.42	0	97.50	84.08
	7/11/1996	ND	11.92	0	97.50	85.58
	9/11/1996	ND	12.90	0	97.50	84.60
	11/5/1996	Could not locate due to snow				
	7/17/1997	ND	11.27	0	97.50	86.23
	10/9/1997	ND	12.87	0	97.50	84.63
	6/25/1998	ND	11.85	0	97.50	85.65
	8/12/1998	NM	12.97	0	97.50	84.53
	10/22/1998	ND	13.1	0	97.50	84.40
	3/18/1999	ND	11.7	0	97.50	85.80
	6/22/1999	ND	9.28	0	97.50	88.22
	9/16/1999	ND	12.98	0	97.50	84.52
	12/2/1999	Well Under Standing Water				
	3/30/2000	ND	11.24	0	97.50	86.26
	6/14/2000	ND	10.73	0	97.50	86.77
HC-4	10/27/1994	13.3	15.34	2.04	98.94	83.60
	6/30/1995	11.89	15.49	3.6	98.94	83.45
	9/21/95	13.67	NM	NM	98.94	85.27
	7/11/1996	11.58	12.93	1.35	98.94	86.01
	9/11/1996	13.53	13.93	0.40	98.94	85.01
	11/5/1996	11.82	13.62	1.80	98.94	85.32

Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
HC-4	7/17/1997	11.65	13.25	1.60	98.94	85.69
(Continued)	10/9/1997	12.67	14.92	2.25	98.94	84.02
	6/25/1998	11.53	12.49	0.96	98.94	86.45
	8/12/1998	NM	13.9	NM	98.94	85.04
	10/22/1998	10.3	14.7	4.40	98.94	84.24
	3/18/1999	10.5	14.05	4.45	98.94	84.89
	6/22/1999	16.9	13.9	4.00	98.94	85.04
	9/16/1999	15.89	17.57	1.68	98.94	81.37
	12/2/1999	Not Measured				
	3/30/2000	10.68	11.70	1.02	98.94	87.24
	6/14/2000	10.41	10.92	0.51	98.94	88.02
HC-5	11/5/1996	ND	11.22	0	97.95	86.73
	7/17/1997	Monument under standing water				
	10/9/1997	Monument under standing water				
	6/25/1998	Lost during road construction				
	6/14/2000	ND	7.71	0	97.95	90.24
MW-4	9/14/94	ND	12.88	0	99.76	86.88
	6/30/95	ND	10.19	0	99.76	89.57
	9/21/95	ND	11.95	0	99.76	87.81
	7/11/1996	Sheen	10.18	0	99.76	89.58
	9/11/1996	Sheen	11.33	0	99.76	88.43
	11/5/1996	Lost during road construction				
MW-5	10/27/1994	ND	10.45	0	97.76	87.31
	6/30/1995	ND	9.13	0	97.76	88.63
	9/21/95	ND	10.83	0	97.76	86.93
	7/11/1996	ND	8.98	0	97.76	88.78
	9/11/1996	ND	10.71	0	97.76	87.05
	11/5/1996	ND	10.65	0	97.76	87.11
	7/17/1997	ND	8.75	0	97.76	89.01
	10/9/1997	ND	10.89	0	97.76	86.87
	6/25/1998	ND	8.56	0	97.76	89.20
	8/12/1998	NM	10.68	0	97.76	87.08
	10/22/1998	ND	13.5	0	97.76	84.26
	3/18/1999	ND	8.8	0	97.76	88.96
	6/22/1999	ND	6.44	0	97.76	91.32
	9/16/1999	ND	10.8	0	97.76	86.96
	12/2/1999	ND	9.82	0	97.76	87.94
	3/30/2000	ND	8.39	0	97.76	89.37
	6/14/2000	ND	9.07	0	97.76	88.69
MW-11	9/14/94	12	NA	NA	98.16	NA
	6/30/95	5.54	7.25	1.71	98.16	90.41
	7/11/1996	6.34	10.00	3.66	98.16	88.16
	9/11/1996	3.25	7.20	3.95	98.16	90.96
	11/5/1996	3.05	7.20	4.15	98.16	90.96
	7/17/1997	6.33	9.99	3.66	98.16	88.17
	8/12/1998	NM	3.90	NM	98.16	94.26
	10/22/1998	6.96	8.00	1.04	98.16	90.16
	9/16/1999	Not Measured				

Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
MW-11	12/2/1999	6.9	7.37	0.47	98.16	90.79
(Continued)	3/30/2000	7.33	7.82	0.49	98.16	90.34
	6/14/2000	8.2	10.95	2.75	98.16	87.21
P-1	10/27/1994	ND	17.31	0	101.42	84.11
	6/30/1995	ND	16.72	0	101.42	84.70
	9/21/95	ND	17.4	0	101.42	84.02
	7/11/1996	ND	15.87	0	101.42	85.55
	9/11/1996	ND	16.98	0	101.42	84.44
	11/5/1996	ND	17.06	0	101.42	84.36
	7/17/1997	ND	15.34	0	101.42	86.08
	10/9/1997	ND	17.64	0	101.42	83.78
	6/25/1998	ND	14.53	0	101.42	86.89
	8/12/1998	NM	16.72	0	101.42	84.70
	10/22/1998	ND	15.6	0	101.42	85.82
	3/18/1999	ND	15.65	0	101.42	85.77
	6/22/1999	ND	13	0	101.42	88.42
	9/16/1999	ND	16.84	0	101.42	84.58
	12/2/1999	ND	15.93	0	101.42	85.49
	3/30/2000	ND	15.14	0	101.42	86.28
	6/14/2000	ND	14.49	0	101.42	86.93
P-2	10/27/1994	ND	15.87	0	100.06	84.19
	6/30/1995	ND	15.26	0	100.06	84.80
	9/21/95	ND	16.04	0	100.06	84.02
	7/11/1996	ND	14.52	0	100.06	85.54
	9/11/1996	ND	15.62	0	100.06	84.44
	11/5/1996	ND	15.08	0	100.06	84.98
	7/17/1997	ND	13.92	0	100.06	86.14
	10/9/1997	ND	16.09	0	100.06	83.97
	6/25/1998	ND	15.95	0	100.06	84.11
	8/12/1998	NM	15.3	0	100.06	84.76
	10/22/1998	NM	16.95	0	100.06	83.11
	3/18/1999	NM		0	100.06	86.02 ****
	6/22/1999	ND	11.65	0	100.06	88.41
	9/16/1999	ND	15.46	0	100.06	84.60
	12/2/1999	ND	14.55	0	100.06	85.51
	3/30/2000	ND	13.79	0	100.06	86.27
	6/14/2000	ND	13.13	0	100.06	86.93
River at EW-1	10/27/1994					83.12 *
	6/30/1995					84.03 **
	9/21/95					82.24
	7/11/1996					83.74 ***
	9/11/1996					82.56
	11/5/1996					83.16
	7/17/1997					82.39
	10/9/1997					83.00
	6/25/1998					85.22
	8/12/1998					85.42
	10/22/1998					85.00
	3/18/1999					83.93

Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
River at EW-1 (Continued)	6/22/1999					83.93
	9/16/1999					78.28
	12/299					78.28
	3/30/2000					84.93
River at EW-2	10/27/1994					84.41
	6/30/1995					85.32
	9/21/95					83.53
	7/11/1996					85.03
	9/11/1996					83.85
	11/5/1996					83.59
	7/17/1997					85.35
	10/9/1997					84.20
	6/25/1998					86.42
	8/12/1998					86.62
	10/22/1998					86.20
	3/18/1999					85.13
	6/22/1999					85.13
	9/16/1999					79.48
	12/2/1999					84.17
	3/30/2000					86.13
River at EW-3	10/27/1994					85.16 *
	6/30/1995					86.07
	9/21/95					84.28
	7/11/1996					85.78 ***
	9/11/1996					84.60
	11/5/1996					84.10
	7/17/1997					86.31
	10/9/1997					85.16
	6/25/1998					85.16
	8/12/1998					85.65
	10/22/1998					85.23
	3/18/1999					86.10
	6/22/1999					89.45
	9/16/1999					85.29
	12/2/1999					85.13
	3/30/2000					87.09
River at EW-4	10/27/1994					86.49 *
	6/30/1995					87.40
	9/21/95					85.61
	7/11/1996					87.11 ***
	9/11/1996					85.93
	11/5/1996					86.44
	7/17/1997					87.27
	10/9/1997					86.12
	6/25/1998					88.34
	8/12/1998					88.54
	10/22/1998					88.12
	3/18/1999					87.05

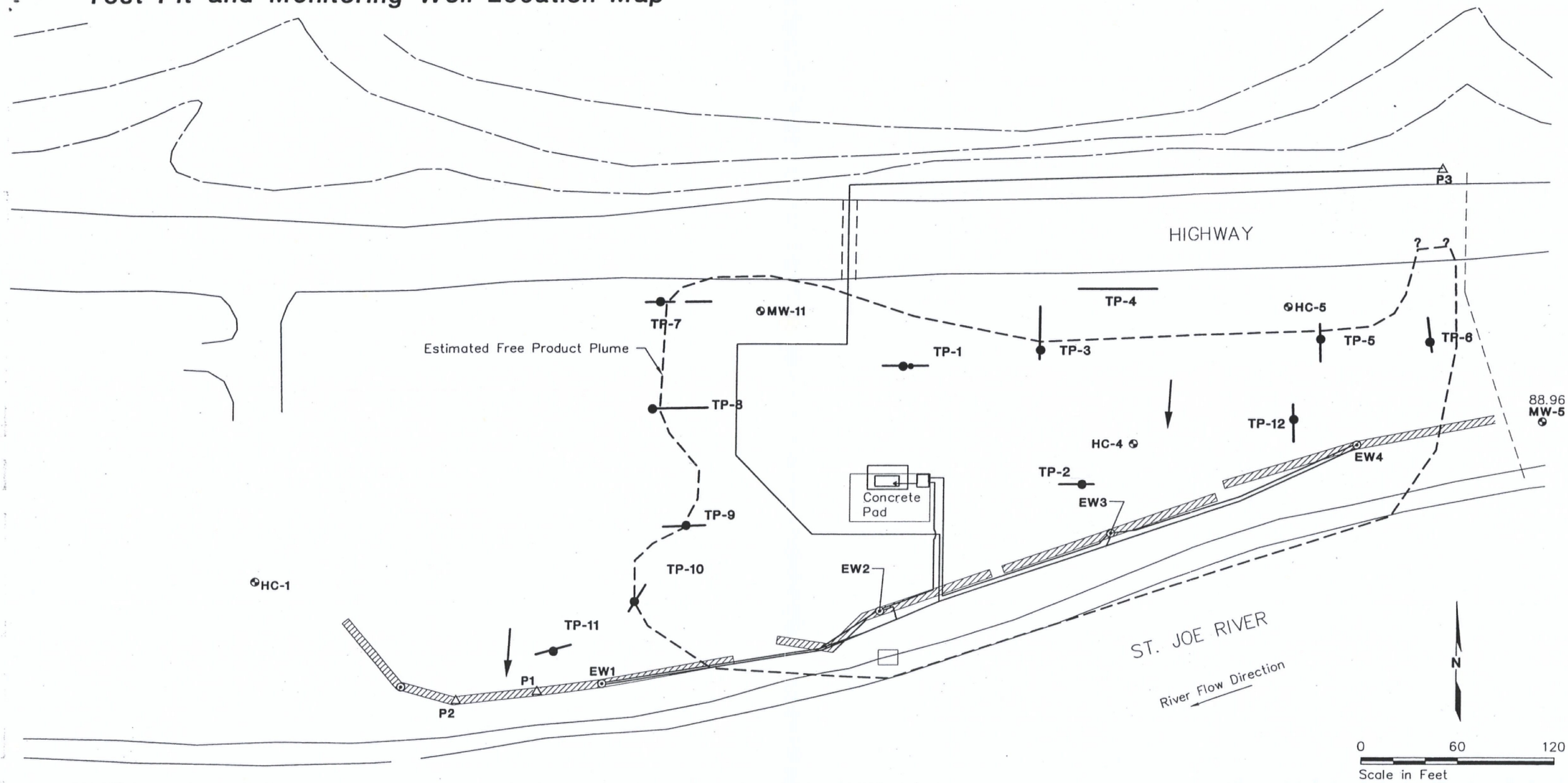
Table 1 - Avery Landing Groundwater and River Monitoring Data

Monitoring Location	Date	Depth to Product	Depth to Water	Product Thickness	T.O.C. Elevation	Groundwater Elevation
River at EW-4 (Continued)	6/22/1999					90.40
	9/16/1999					86.89
	12/2/1999					86.09
	3/30/2000					88.07
TP-1 (2")	6/14/2000	13.24	13.75	0.51	96.06	82.31
TP-1 (4")	6/14/2000	13.7	13.74	0.04	96.66	82.92
TP-2 (4")	6/14/2000	Sheen	13.12	0	96.04	82.92
TP-3 (4")	6/14/2000	Sheen	14.11	0	97.34	83.23
TP-5 (4")	6/14/2000	Sheen	13.57	0	97.83	84.26
TP-6 (4")	6/14/2000	12.39	12.41	0.02	96.66	84.25
TP-7 (4")	6/14/2000	Sheen	11.95	0	96.08	84.13
TP-8 (4")	6/14/2000	ND	14.63	0	97.2	82.57
TP-9 (4")	6/14/2000	ND	15.5	0	97.28	81.78
TP-10 (4")	6/14/2000	Sheen	15.35	0	96.56	81.21
TP-11 (4")	6/14/2000	ND	15.3	0	96.36	81.06
TP-12 (4")	6/14/2000	Sheen	12.49	0	95.9	83.41

Notes:
All measurements in feet.
* River elevation was extrapolated from the river surface slope measured in 1995 and the river elevation measured south of EW-2 in 1994.
** River elevation was extrapolated from river surface slope, based on river elevations measured south of EW-2, EW-3, and EW-4 in 1995.
*** River elevation was extrapolated from river surface slope, and the wood dock benchmark.

T.O.C. - Top of Casing
ND - Not Detected
NA - Not Available
NM - Not Measured

Test Pit and Monitoring Well Location Map



Exploration Location and Number

MW-4	Monitoring Well
EW1	Extraction Well
P1	Piezometer
HC-5	Lost During Construction (1997)

Approximate Groundwater Flow Direction

Existing Extraction Trench

TP-1 Test Pit Location and Number

Monitoring Well Location

Note: TP-1 has two well casings, 4-inch and 2-inch. Other test pits have 4-inch casings.

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J-2296-07 8/00

Figure 1